Table 39 (page 1 of 4). Death rates for malignant neoplasms, according to sex, race, Hispanic origin, and age: United States, selected years 1950–2000

[Data are based on death certificates]

Sex, race, Hispanic origin, and age	1950¹	1960¹	1970	1980	1990	1995	1997	1998	Comparability modified 1998 <sup>2</sup>	1999 <sup>3</sup>	2000 <sup>3</sup>
All persons				D	eaths per	100,000	resident p	opulation			
All ages, age adjusted All ages, crude	193.9 139.8	193.9 149.2	198.6 162.8	207.9 183.9	216.0 203.2	211.7 204.9	205.7 201.6	202.4 200.3	203.8 201.7	202.7 201.6	201.0 200.9
Under 1 year. 1–4 years 5–14 years 15–24 years 25–34 years 35–44 years 45–54 years 55–64 years 65–74 years 75–84 years 85 years and over	8.7 11.7 6.7 8.6 20.0 62.7 175.1 390.7 698.8 1,153.3 1,451.0	7.2 10.9 6.8 8.3 19.5 59.7 177.0 396.8 713.9 1,127.4 1,450.0	4.7 7.5 6.0 8.3 16.5 59.5 182.5 423.0 754.2 1,169.2 1,320.7	3.2 4.5 4.3 6.3 13.7 48.6 180.0 436.1 817.9 1,232.3 1,594.6	2.3 3.5 3.1 4.9 12.6 43.3 158.9 449.6 872.3 1,348.5 1,752.9	1.8 3.1 2.7 4.6 11.9 40.3 142.2 416.0 868.2 1,364.8 1,823.8	2.4 2.9 2.7 4.5 11.6 38.9 135.1 395.7 847.3 1,335.2 1,805.0	2.1 2.4 2.6 4.6 11.3 38.2 132.3 383.8 841.3 1,326.3 1,749.4	2.1 2.4 2.6 4.6 11.4 38.5 133.2 386.4 847.0 1,335.3 1,761.3	1.8 2.8 2.6 4.6 10.6 37.3 130.4 380.8 836.2 1,340.0 1,796.7	2.4 2.8 2.6 4.5 10.5 36.8 129.3 371.3 826.4 1,340.8 1,795.6
Male											
All ages, age adjusted All ages, crude	208.1 142.9	225.1 162.5	247.6 182.1	271.2 205.3	280.4 221.3	268.8 219.5	258.0 214.6	252.4 213.6	254.1 215.1	251.6 214.5	247.4 212.5
Under 1 year. 1–4 years 5–14 years 15–24 years 25–34 years 35–44 years 45–54 years 55–64 years 65–74 years 75–84 years 85 years and over	9.7 12.5 7.4 9.7 17.7 45.6 156.2 413.1 791.5 1,332.6 1,668.3	7.7 12.4 7.6 10.2 18.8 48.9 170.8 459.9 890.5 1,389.4 1,741.2	4.4 8.3 6.7 10.4 16.3 53.0 183.5 511.8 1,006.8 1,588.3 1,720.8	3.7 5.2 4.9 7.8 13.4 44.0 188.7 520.8 1,093.2 1,790.5 2,369.5	2.4 3.7 3.5 5.7 12.6 38.5 162.5 532.9 1,122.2 1,914.4 2,739.9	1.8 3.6 3.0 5.5 11.7 36.5 143.7 480.5 1,089.9 1,842.3 2,837.3	2.3 3.1 2.8 5.2 11.5 34.5 138.0 453.4 1,058.4 1,770.2 2,712.5	2.2 2.4 2.9 5.4 10.9 34.4 136.5 441.1 1,045.5 1,745.6 2,562.6	2.2 2.4 2.9 5.4 11.0 34.6 137.4 444.1 1,052.6 1,757.5 2,580.0	1.8 2.9 2.7 5.3 10.4 33.6 135.1 437.9 1,031.2 1,746.2 2,619.2	2.5 3.0 2.8 5.2 10.0 32.9 133.3 423.5 1,014.0 1,730.9 2,571.9
Female									'		
All ages, age adjusted All ages, crude	182.3 136.8	168.7 136.4	163.2 144.4	166.7 163.6	175.7 186.0	175.4 191.0	171.6 189.2	169.2 187.7	170.4 189.0	169.9 189.4	169.6 189.9
Under 1 year. 1–4 years 5–14 years 15–24 years 25–34 years 35–44 years 45–54 years 55–64 years 65–74 years 75–84 years 85 years and over	7.6 10.8 6.0 7.6 22.2 79.3 194.0 368.2 612.3 1,000.7 1,299.7	6.8 9.3 6.0 6.5 20.1 70.0 183.0 337.7 560.2 924.1 1,263.9	5.0 6.7 5.2 6.2 16.7 65.6 181.5 343.2 557.9 891.9 1,096.7	2.7 3.7 3.6 4.8 14.0 53.1 171.8 361.7 607.1 903.1 1,255.7	2.2 3.2 2.8 4.1 12.6 48.1 155.5 375.2 677.4 1,010.3 1,372.1	1.8 2.6 2.4 3.6 12.2 44.0 140.7 357.5 690.7 1,061.5 1,429.1	2.5 2.6 2.5 3.7 11.7 43.1 132.3 343.2 676.8 1,050.6 1,439.2	1.9 2.4 2.3 3.7 11.7 42.1 128.2 331.6 675.2 1,048.6 1,412.5	1.9 2.4 2.3 3.7 11.8 42.4 129.1 333.9 679.8 1,055.7 1,422.1	1.7 2.6 2.4 3.8 10.7 41.1 125.9 328.7 676.6 1,068.1 1,449.1	2.2 2.5 2.3 3.7 11.0 40.6 125.5 323.6 671.8 1,077.4 1,461.3
White male				/							
All ages, age adjusted	210.0 147.2	224.7 166.1	244.8 185.1	265.1 208.7	272.2 227.7	261.8 228.1	251.9 223.3	246.9 223.0	224.5	246.5 224.2	242.5 222.5
25–34 years 35–44 years 45–54 years 55–64 years 65–74 years 75–84 years 85 years and over	17.7 44.5 150.8 409.4 798.7 1,367.6 1,732.7	18.8 46.3 164.1 450.9 887.3 1,413.7 1,791.4	16.2 50.1 172.0 498.1 997.0 1,592.7 1,772.2	13.6 41.1 175.4 497.4 1,070.7 1,779.7 2,375.6	12.3 35.8 149.9 508.2 1,090.7 1,883.2 2,715.1	11.3 34.2 134.3 460.0 1,064.6 1,810.9 2,805.2	11.2 32.3 129.0 432.4 1,038.7 1,746.1 2,695.5	10.7 32.6 126.5 422.4 1,030.1 1,722.4 2,554.3	10.8 32.8 127.4 425.3 1,037.1 1,734.1 2,571.7	10.2 32.0 126.0 419.9 1,017.1 1,723.2 2,612.7	10.0 31.0 125.0 406.8 999.3 1,707.1 2,569.2
Black male		067.5	05:5	050	007.5	0=0.5	05.5	0.10		0.10 =	000.5
All ages, age adjusted All ages, crude	178.9 106.6	227.6 136.7	291.9 171.6	353.4 205.5	397.9 221.9	372.8 209.1	354.7 203.0	343.1 199.0	345.4 200.4	340.5 198.4	333.2 195.6
25–34 years 35–44 years 45–54 years 55–64 years 65–74 years 75–84 years <sup>4</sup> 85 years and over	18.0 55.7 211.7 490.8 636.5 853.5	18.4 72.9 244.7 579.7 938.5 1,053.3 1,155.2	18.8 81.3 311.2 689.2 1,168.9 1,624.8 1,387.0	14.1 73.8 333.0 812.5 1,417.2 2,029.6 2,393.9	15.7 64.3 302.6 859.2 1,613.9 2,478.3 3,238.3	15.2 57.5 250.7 755.3 1,509.6 2,426.8 3,338.2	14.5 54.3 235.3 723.3 1,412.4 2,298.4 3,306.2	12.9 50.0 241.0 697.4 1,344.7 2,284.5 3,050.5	13.0 50.3 242.6 702.1 1,353.8 2,300.0 3,071.2	11.9 47.7 232.3 689.2 1,316.4 2,302.5 3,098.1	10.5 48.8 223.2 654.3 1,303.5 2,283.6 3,012.7

See footnotes at end of table.

38 ...... Health, United States, 2002

Table 39 (page 2 of 4). Death rates for malignant neoplasms, according to sex, race, Hispanic origin, and age: United States, selected years 1950–2000

[Data are based on death certificates]

Sex, race, Hispanic origin, and age	1950¹	1960 <sup>1</sup>	1970	1980	1990	1995	1997	1998	Comparability modified 1998 <sup>2</sup>	1999 <sup>3</sup>	2000 <sup>3</sup>
American Indian or Alaska Native male <sup>5</sup>					eaths per	100,000	resident p	opulation			
All ages, age adjusted All ages, crude				140.5 58.1	145.8 61.4	153.7 74.2	163.3 84.7	155.0 80.6	156.1 81.1	150.9 80.0	151.8 82.7
25–34 years				*	*	*	*	*	*	*	*
35–44 years				*	22.8	16.0	25.0	26.8	27.0	19.6	27.2
45–54 years				86.9	86.9	88.0	109.3	90.6	91.2	91.4	90.2
55–64 years				213.4 613.0	246.2 530.6	300.3 670.4	336.2 761.6	286.7 711.3	288.6 716.1	294.5 716.5	315.9 699.8
75–84 years				936.4	1.038.4	1,111.9	1.041.1	1,070.7	1.078.0	980.6	956.7
85 years and over				1,471.2	1,654.4	1,081.5	1,011.3	1,067.0	1,074.3	1,067.5	1,078.1
Asian or Pacific Islander male <sup>6</sup>											
All ages, age adjusted All ages, crude				165.2 81.9	172.5 82.7	182.7 87.1	158.9 87.0	155.5 89.0	156.6 89.6	154.2 89.2	155.1 89.3
				6.3	9.2	8.8	9.4	9.4	9.5	10.2	8.4
25–34 years				29.4	27.7	27.4	26.1	26.0	26.2	26.6	26.6
45–54 years				108.2	92.6	86.6	89.0	91.5	92.1	84.4	82.0
55–64 years				298.5	274.6	255.4	261.6	246.5	248.2	243.5	244.1
65–74 years				581.2 1,147.6	687.2 1,229.9	640.6 1,278.9	596.2	630.8 1,095.3	635.1 1,102.7	609.3 1,085.4	606.3 1,131.8
75–84 years				1,798.7	1,837.0	2,712.8	1,160.3 1,674.0	1,556.0	1,566.6	1,657.4	1,638.1
Hispanic male <sup>7</sup>									I		
All ages, age adjusted					174.7 65.5	172.5 68.9	157.7 65.4	157.3 68.7	158.4 69.2	151.4 67.7	150.1 68.3
All ages, crude					8.0	9.2	8.8	8.5	8.6	8.2	8.9
35–44 years					22.5	25.4	22.5	21.8	21.9	20.8	21.2
45–54 years					96.6	85.8	87.3	87.7	88.3	86.9	80.9
55–64 years					294.0	276.8	256.0	258.7	260.5	264.7	248.7
65–74 years					655.5 1,233.4	667.1 1,272.1	627.2 1,123.5	666.2 1,087.5	670.7 1,094.9	626.7 1,054.0	605.6 1,082.4
75–84 years					2,019.4	1,858.7	1,658.8	1,551.0	1,561.5	1,419.8	1,470.0
White, non-Hispanic male <sup>7</sup>									I		
All ages, age adjusted					276.7 246.2	264.9 247.1	256.2 244.7	251.2 243.9	252.9 245.6	251.4 246.3	247.5 245.0
25–34 years					12.8	11.4	11.5	10.9	11.0	10.5	10.1
35–44 years					36.8	34.7	33.1	33.7	33.9	33.2	32.1
45–54 years					153.9	137.0	131.9	129.1	130.0	128.8	128.3
55–64 years					520.6 1,109.0	469.9	443.3	432.2	435.1	429.6	417.2
65–74 years					1,109.0	1,081.1 1,825.6	1,057.8 1,765.7	1,047.5 1,745.8	1,054.6 1,757.7	1,037.6 1,750.2	1,021.3 1,734.0
85 years and over					2,744.4		2,738.3	2,599.8	2,617.5	2,670.7	2,625.3
White female									l		
All ages, age adjusted All ages, crude	182.0 139.9	167.7 139.8	162.5 149.4	165.2 170.3	174.0 196.1	173.7 202.4	170.0 200.4	167.7 199.1	168.8 200.5	168.6 201.1	168.7 202.2
25–34 years	20.9	18.8	16.3	13.5	11.9	11.5	11.2	11.2	11.3	10.5	10.6
35–44 years	74.5	66.6	62.4	50.9	46.2	42.0	40.6	39.3	39.6	38.7	38.2
45–54 years	185.8	175.7	177.3	166.4	150.9	136.1	128.4	123.3	124.1	121.9	120.9
55–64 years	362.5 616.5	329.0 562.1	338.6 554.7	355.5 605.2	368.5 675.1	352.6 689.6	339.6 674.6	326.5 675.7	328.7	324.3 677.3	321.7 674.7
65-74 years	1,026.6 1,348.3	939.3 1,304.9	903.5 1,126.6	905.4 1,266.8	1,011.8 1,372.3	1,060.2 1,428.2	1,049.7 1,435.8	1,051.1 1,415.1	680.3 1,058.2 1,424.7	677.3 1,067.6 1,453.0	1,080.1 1,464.7
co years and ever	1,0-10.0	1,004.0	1,120.0	1,200.0	1,012.0	1,720.2	1,-00.0	1,-10.1	1,727.1	1,-100.0	1,-10-1.7

See footnotes at end of table.

Table 39 (page 3 of 4). Death rates for malignant neoplasms, according to sex, race, Hispanic origin, and age: United States, selected years 1950–2000

[Data are based on death certificates]

Sex, race, Hispanic origin,									Comparability modified		
and age	1950¹	1960 <sup>1</sup>	1970	1980	1990	1995	1997	1998	1998 <sup>2</sup>	1999 <sup>3</sup>	2000 <sup>3</sup>
Black female					Deaths	per 100,00	0 resident	population	n		
All ages, age adjusted All ages, crude	174.1 111.8	174.3 113.8	173.4 117.3	189.5 136.5	205.9 156.1	206.0 159.1	204.4 160.5	200.0 158.5	201.4 159.6	200.2 159.0	196.6 157.2
25–34 years 35–44 years 45–54 years 55–64 years 65–74 years 75–84 years <sup>4</sup> 85 years and over	34.3 119.8 277.0 484.6 477.3 605.3	31.0 102.4 254.8 442.7 541.6 696.3 728.9	20.9 94.6 228.6 404.8 615.8 763.3 791.5	18.3 73.5 230.2 450.4 662.4 923.9 1,159.9	18.7 67.4 209.9 482.4 773.2 1,059.9 1,431.3	16.8 62.2 192.7 443.6 799.6 1,154.1 1,490.3	16.2 62.9 180.6 426.4 789.7 1,166.5 1,602.3	15.6 64.1 180.9 419.9 770.2 1,138.3 1,513.5	15.7 64.5 182.1 422.8 775.4 1,146.0 1,523.8	13.4 60.5 171.9 408.9 767.3 1,194.4 1,560.4	14.1 59.5 175.7 386.6 744.5 1,177.6 1,582.6
American Indian or Alaska Native female⁵											
All ages, age adjusted All ages, crude				94.0 50.4	106.9 62.1	110.9 69.9	108.6 71.8	111.3 74.9	112.1 75.4	109.1 73.3	109.1 74.6
25–34 years 35–44 years 45–54 years 55–64 years 65–74 years 75–84 years 85 years and over				36.9 96.9 198.4 350.8 446.4 786.5	31.0 104.5 213.3 438.9 554.3 843.7	11.1 33.5 85.2 223.2 427.7 723.9 736.6	11.0 36.8 88.3 245.5 467.5 613.4 561.9	33.4 94.9 255.8 481.1 599.9 649.0	33.6 95.5 257.5 484.4 604.0 653.4	27.7 78.6 256.0 488.4 671.9 495.8	30.9 75.7 236.0 487.1 657.6 641.5
Asian or Pacific Islander female <sup>6</sup>											
All ages, age adjusted All ages, crude				93.0 54.1	103.0 60.5	114.5 71.5	103.7 71.1	100.9 71.0	101.6 71.5	104.0 74.3	103.0 74.8
25–34 years 35–44 years 45–54 years 55–64 years 65–74 years 75–84 years 85 years and over				9.5 38.7 99.8 174.7 301.9 522.1 800.0	7.3 29.8 93.9 196.2 346.2 641.4 971.7	10.6 28.6 98.0 211.4 351.2 722.6 1,307.7	7.0 31.5 81.1 176.7 376.4 662.1 1,014.0	9.3 27.7 83.3 186.8 362.7 639.9 908.8	9.4 27.9 83.9 188.1 365.2 644.3 915.0	7.5 28.0 83.1 195.2 379.3 670.6 919.5	8.9 29.4 82.2 186.3 374.0 666.2 912.1
Hispanic female <sup>7</sup>								,	'		
All ages, age adjusted All ages, crude					111.9 60.7	106.1 60.5	103.8 61.4	100.5 60.4	101.2 60.8	101.4 61.4	100.6 62.0
25–34 years 35–44 years 45–54 years 55–64 years 65–74 years 75–84 years 85 years and over					9.7 34.8 100.5 205.4 404.8 663.0 1,022.7	9.2 31.2 89.7 197.6 382.3 659.6 938.2	10.3 30.5 84.7 201.6 388.2 622.4 888.6	9.6 29.8 86.7 189.9 390.4 588.5 835.2	9.7 30.0 87.3 191.2 393.1 592.5 840.9	9.6 30.1 85.8 180.5 381.4 626.8 869.9	9.1 31.5 84.6 184.3 383.7 625.1 789.5

See footnotes at end of table.

40 Health, United States, 2002

## Table 39 (page 4 of 4). Death rates for malignant neoplasms, according to sex, race, Hispanic origin, and age: United States, selected years 1950–2000

[Data are based on death certificates]

1950 <sup>1</sup>	1960¹	1970	1980	1990	1995	1997	1998	Comparability modified 1998 <sup>2</sup>	1999 <sup>3</sup>	2000³
Deaths per 100,000 resident population										
				177.5 210.6	176.6 218.4	173.1 217.3	171.1 216.9	172.3 218.4	172.1 219.7	172.5 221.5
				11.9 47.0	11.7 42.7	11.2 41.4	11.3 40.1	11.4 40.4	10.4 39.4	10.7 38.7
				154.9 379.5	139.3 362.7	131.2 348.5	125.7 335.7	126.6 338.0	124.5 334.7	123.6 331.6
				1,027.2	1,070.5	1,063.9	1,068.3	1,075.6	1,084.4	692.9 1,099.0 1,492.6
			    		Deaths 177.5 210.6 11.9 47.0 154.9 379.5 688.5 1,027.2	Deaths per 100,0 177.5 176.6 210.6 218.4 11.9 11.7 47.0 42.7 154.9 139.3 379.5 362.7 688.5 703.1 1,027.2 1,070.5	Deaths per 100,000 resider 177.5 176.6 173.1 210.6 218.4 217.3 11.9 11.7 11.2 47.0 42.7 41.4 154.9 139.3 131.2 379.5 362.7 348.5 688.5 703.1 688.7 1,027.2 1,070.5 1,063.9	Deaths per 100,000 resident population  177.5 176.6 173.1 171.1  210.6 218.4 217.3 216.9  11.9 11.7 11.2 11.3  47.0 42.7 41.4 40.1  154.9 139.3 131.2 125.7  379.5 362.7 348.5 335.7  688.5 703.1 688.7 691.2  1,027.2 1,070.5 1,063.9 1,068.3	Deaths per 100,000 resident population  Deaths per 100,000 resident population  1950 1997 1998 modified 1998  Deaths per 100,000 resident population  172.3 216.9 218.4 217.3	Deaths per 100,000 resident population  Deaths per 100,000 resident population  1998 1998 1998 1998 1999  Deaths per 100,000 resident population  172.1 172.3 172.1 172.1 172.3 172.1 172.1 172.3 172.1 172.1 172.3 172.1 172.1 172.3 172.1 172.1 172.3 172.1 172.1 172.3 172.1 172.1 172.3 172.1 172.1 172.1 172.3 172.1 172.1 172.1 172.1 172.3 172.1 172.

<sup>- - -</sup> Data not available.

NOTES: Age-adjusted rates are calculated using the year 2000 standard population starting with *Health, United States, 2001*. See Appendix II, Age adjustment. For data years shown, code numbers for cause of death are based on the then current revision of the *International Classification of Diseases* (ICD). See Appendix II, tables IV and V. Age groups were selected to minimize the presentation of unstable age-specific death rates based on small numbers of deaths and for consistency among comparison groups. The race groups, white, black, Asian or Pacific Islander, and American Indian or Alaska Native, include persons of Hispanic and non-Hispanic origin. Conversely, persons of Hispanic origin may be of any race. Bias in death rates results from inconsistent race identification between the death certificate (source of data for numerator of death rates) and data from the Census Bureau (denominator); and from undercounts of some population groups in the census. The net effects of misclassification and under coverage result in death rates estimated to be overstated by 1 percent for the white population and 5 percent for the black population; and death rates estimated to be understated by 21 percent for American Indians, 11 percent for Asians, and 2 percent for Hispanics (Rosenberg HM, Maurer JD, Sorlie PD, Johnson NJ, et al. Quality of death rates by race and Hispanic origin: A summary of current research, 1999. National Center for Health Statistics. Vital Health Stat 2(128). 1999. Data for additional years are available (see Appendix III).

SOURCES: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System; Grove RD and Hetzel AM. Vital statistics rates in the United States, 1940–60. Washington: Public Health Service, 1968; Vital statistics of the United States, vol II, mortality, part A, for data years 1950–93. Public Health Service. Washington: U.S. Government Printing Office; for 1994–99, data for all persons, white, and black are available on the NCHS Web site at www.cdc.gov/nchs/datawh/statab/unpubd/mortabs.htm; numerator data from National Vital Statistics System, annual mortality files; denominator data from national population estimates for race groups from table 1 and unpublished Hispanic population estimates prepared by the Housing and Household Economic Statistics Division, U.S. Bureau of the Census for 1985–96. Minino AM, Arias E, Kochanek KD, Murphy SL, Smith BL. Deaths: Final data for 2000. National vital statistics reports. vol 50 no 15. Hyattsville, Maryland: National Center for Health Statistics. 2002.

<sup>\*</sup> Based on fewer than 20 deaths.

<sup>&</sup>lt;sup>1</sup>Includes deaths of persons who were not residents of the 50 States and the District of Columbia.

<sup>&</sup>lt;sup>2</sup>Calculated by multiplying the 1998 rate by its comparability ratio to adjust for differences between ICD-9 and ICD-10. See Appendix II, Comparability ratio and table VI

<sup>&</sup>lt;sup>3</sup>Starting with 1999 data, cause of death is coded according to ICD-10. To estimate change between 1998 and 1999, compare the 1999 rate with the comparability-modified rate for 1998. See Appendix II, Comparability ratio and tables V and VI.

<sup>4</sup>In 1950 rate is for the age group 75 years and over.

<sup>&</sup>lt;sup>5</sup>Interpretation of trends should take into account that population estimates for American Indians increased by 45 percent between 1980 and 1990, partly due to better enumeration techniques in the 1990 decennial census and to the increased tendency for people to identify themselves as American Indian in 1990. <sup>6</sup>Interpretation of trends should take into account that the Asian population in the United States more than doubled between 1980 and 1990, primarily due to immigration.

<sup>&</sup>lt;sup>7</sup>Excludes data from States lacking an Hispanic-origin item on their death certificates. See Appendix I, National Vital Statistics System.